

Notice of Allowability

Application No.

10/781,136

Examiner

Man Phan

Applicant(s)

BACKES ET AL.

Art Unit

2619

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to communications filed 10/15/2007.
2. ☒ The allowed claim(s) is/are 1-4.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Reasons for allowance

1. This communication is in response to applicant's 10/15/2007 Amendment in the application of Backes et al. for an "Apparatus for scanning radio frequency channels" filed 02/18/2004. The amendment has been entered and made of record. Applicant's response with regard to the rejection are persuasive. Claim 1 has been amended. The terminal disclaimer filed on 10/15/2007 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent No. 7,076,220 and 7,167,696 filed 02/18/2004 and issued 07/11/2006 and 01/23/2007 respectively, have been reviewed and are accepted. The terminal disclaimer has been recorded.

2. Claims 1-4 are allowable as evident by applicant's amendment.

3. The following is an examiner's statement of reasons for allowance: The instant application is deemed to be directed to a nonobvious improvement over the invention patented in closest prior arts of record. The improvement comprises: scanning logic for scanning a plurality of radio frequency channels during a scan interval; logic for receiving messages on each of the plurality of radio frequency channels during the scan interval; logic for maintaining a scan table having an entry for each device from which a message is received during the scan interval; logic for maintaining a channel map having an entry for each of the plurality of radio frequency channels on which a message was received, each entry containing a device ID of a device that sent a message on the corresponding channel; logic for sorting the channel map into a triplet

channel map, wherein each successive group of three entries is associated with three successive channels, wherein the average power is stored in the entry for each channel; logic for selecting a channel from the triplet channel map, by selecting the channel from the triplet with the lowest center average power; logic for transmitting preclaim messages on the selected channel during a preclaim interval; logic for receiving messages on the selected channel and updating the scan table based on each message received during the preclaim interval; logic for calculating an adjacency vector sum, the vector sum representing the sum of all average power levels on all channels; logic for transmitting claim messages on the selected channel during a claim interval, the claim messages including the adjacency vector sum; logic for receiving messages on the selected channel during the claim interval; logic for maintaining a claim table having an entry for each device ID that sent a message on the selected channel during the claim interval; logic for evaluating the claim table at the end of the claim interval, wherein: if the claim table has no entries, the logic causes the apparatus to commence communications with other devices via the selected channel; if the claim table has entries, then the logic checks to see if the selected channel was occupied at the beginning of the claim interval, and if the selected channel was not occupied at the beginning of the claim interval, the logic causes the apparatus to return to scanning channels during a scan interval; if the selected channel was occupied at the beginning of the claim interval, the logic checks to see if all the claim table entries contain power levels that are less than a power level that was recorded on the selected channel before the claim interval, and if all the claim table entries contain power levels that are less than the power level that was recorded on the selected channel before the claim interval, then the logic causes the apparatus to commence communications with other devices via the selected channel; if any claim table entry

contains a power level that is greater than the power level that was recorded on the selected channel before the claim interval, then the logic compares the adjacency vector sum to an adjacency vector that was received in one of the messages, and if the adjacency vector sum is greater than the adjacency vector received, the logic causes the apparatus to commence communications with other devices via the selected channel, otherwise the logic causes the apparatus to return to scanning channels during a scan interval; as specifically recited in the claims.

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Man U. Phan whose telephone number is (571) 272-3149. The examiner can normally be reached Monday through Friday from 6:00 am to 3:00 pm.

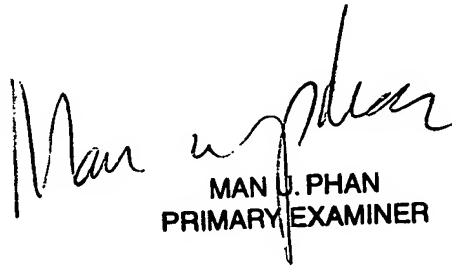
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel, can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-2600.

6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at toll free 1-866-217-9197.

MPhan

12/18/2007



MAN U. PHAN
PRIMARY EXAMINER